



# INTERNAL AUDIT CONTROLS EVALUATION SOLID WASTE MANAGEMENT

March 4, 2002

Roanoke City Council Audit Committee  
Roanoke, Virginia

We have completed an audit of the tipping fees process of the Solid Waste Management department. Our audit was performed in accordance with generally accepted government auditing standards.

## **BACKGROUND**

In 1991, The City of Roanoke, Town of Vinton, and Roanoke County formed a joint venture entity called the Roanoke Valley Resource Authority (RVRA). The RVRA was created to oversee the development and management of a regional landfill system that would comply with all EPA guidelines. The RVRA has a Board of Directors comprised of four representatives from Roanoke County, two representatives from the City of Roanoke, and one representative from the Town of Vinton. The Board of Directors governs the RVRA by setting policy (including fees to be charged) and by requiring an annual external audit that independently reports on the RVRA's financial condition and management.

The RVRA has three distinct components:

- Tinker Creek Transfer Station which is located within the boundaries of the City of Roanoke. RVRA staff weigh-in waste, sort out the recyclables, and load the remaining waste onto rail cars for transport.
- A rail system with custom-designed rail cars to transport waste from Tinker Creek Transfer Station to the Smith Gap landfill.
- The Smith Gap Tipping Station and Landfill, which is located in Roanoke County and where the waste is deposited. The tipping station utilizes a unique machine that picks up each rail car and tips them over to dump out the waste.

Each locality is responsible for managing its own waste collection. The RVRA accepts waste from commercial waste collectors, citizens, and local governments. All are charged the established fees as set by the RVRA Board. RVRA employees manage the scales and computer systems used to record waste deposits, bill users, and collect

payment. Each locality has its own unique provisions for citizen dumps and the locality is primarily responsible for managing compliance with its provisions.

### **PURPOSE**

The purpose of this audit was to evaluate the system of controls in place to ensure:

- Tipping fees were accurately billed and properly remitted
- Terms and conditions of the RVRA membership agreement were adhered to

### **SCOPE**

Our audit evaluated controls, policies, and procedures in place as of September 1, 2001. Our test work primarily focused on data from July 1, 2000 to June 30, 2001.

### **METHODOLOGY**

We conducted this audit using standard auditing procedures for evaluating controls. This included reviewing relevant internal source documents such as the City's Comprehensive Annual Financial Report, Solid Waste Management's strategic business plan, logs, spreadsheets, and databases, and the City's accounting records. We also reviewed relevant external source documents such as the RVRA audited financial statements and annual budget. We interviewed key operational and management personnel at both RVRA and Solid Waste Management. We also reviewed and tested RVRA receipts and monthly billing statements.

### **RESULTS**

During the course of our audit, we determined that the City is to a great extent, dependent on the system of internal controls in place at RVRA. We devoted considerable audit time to evaluating RVRA's budget, its audited financial statements, and its operations. We interviewed a number of their staff and observed operations at the Tinker Creek Transfer Station. We found that the budgeting process and the City's Board representation reasonably assures tipping fee rates are reasonable. The RVRA's annual audit provides reasonable assurance that systems used to process billings are well controlled. We verified that scales are properly certified and that monthly statements are accurate. We also observed the operation of processes that ensure items such as tires are properly billed.

Our review of controls in Solid Waste Management found that scale receipts are properly handled and verified against monthly statements from RVRA. Monthly statements are reviewed for reasonableness, properly authorized, and are paid on a timely basis. Management demonstrated an acute awareness of issues related to tipping fees and residential deposits. We found that certain legislated provisions related to residential waste present challenges to management as noted in our findings below:

**Finding 01: Tire Collections**

City code section 14-21 provides that residents and businesses can have up to two tires collected by Solid Waste Management each week. Citizens are allowed to place their tires in the "blue bins" for pickup. This prohibits Solid Waste personnel from knowing if more than two tires are being deposited. It also mixes the tires in with other waste. RVRA bills \$2 per tire if the tires are separated, \$5 per tire if the tires are mixed in with other waste and have to be separated at the loading station. We approximate that mixing tires with other waste cost the city an additional \$11,000 in fiscal 2001.

**Recommendation 01**

In our discussions with Solid Waste Management, we agreed that the following measures would improve controls and satisfactorily ensure compliance with the ordinance on tires:

- Change the policy of allowing tires to be placed in the blue bins and instead ask that tires be placed beside the blue bins. Publicize this change in policy to the public and the reasons for the change.
- Develop a standard procedure for refuse truck drivers to load the tires onto a separate area of the truck. Include in the procedures the steps to take when more than two tires are set out for collection.
- Explore the possibility of sponsoring an annual tire amnesty event similar to the household chemicals event where citizens can bring in their tires for disposal at no additional charge.

**Management's Response 01**

When the automated refuse collection program was started in 1997, the primary goal was to get citizens comfortable with the transition to the "big blue" cans. As the program has developed, we've worked to educate citizens about those things that should not be deposited in the blue cans. It is now time for us to establish a clear public practice for tire disposal consistent with city code.

We believe our plan as outlined in the recommendations above will address the issues cited in the audit. Our primary concern is that tires be collected rather than refused, since refusal may result in tires finding their way into the City's greenways and streams. Most citizens are conscientious in complying with the rules once the rules are clearly communicated. It is likely that some tires will continue to be placed in the blue cans and we will still see charges for tires with mixed waste. One disadvantage of any automated collection system is that drivers cannot screen waste in the cans at the time of pick-up. As we go forward, we are working to identify recycling opportunities for tires.

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**Finding 02: Citizen Deposits at RVRA**

City Code Section 14-23 (e) allows citizens to deposit up to 12 loads of waste in a calendar year and have the bill paid by the City. In our review of the controls in place to monitor citizen deposits, we noted a number of barriers to developing effective controls over citizen deposits:

- The set-up of the scales at the transfer station make it prohibitive for RVRA to record anything other than the license plate number of vehicles making deposits. They identify the locality to charge based on vehicle decals.
- The computer system used by RVRA to weigh-in citizens at the Tinker Creek Transfer Station scales can only report the date of the last deposit for a vehicle. The scale operator cannot use the computer system to identify persons who have exceeded the 12 allowed waste deposits.
- The city is not represented by any of the parties involved in the transaction. The transaction is between the citizen and RVRA; the City simply pays the bill.
- The Division of Motor Vehicles records are restricted and do not report anything at all for license plates that are not currently active. Since license plate data is the only information recorded when someone deposits trash, it would be difficult for Solid Waste Management to obtain the necessary name and address information to bill persons who exceed their 12-dump limit.

Solid Waste Management currently enters data from RVRA scale receipts into a PC spreadsheet. Using the spreadsheet, Solid Waste Management monitors the number of deposits by vehicle and notifies RVRA when a vehicle has exceeded the 12-dump limit. The scale operator at RVRA adds a notation in the computer system to block further deposits from this vehicle.

When we traced charges from RVRA's monthly statements back into Solid Waste Management's spreadsheet, we noted that approximately one-third of the residential deposits billed were not in the spreadsheet. We subsequently requested a report from the RVRA showing citizen deposits billed and found 6,705 different license plates recorded as city deposits. We found that 124 of these vehicles exceeded the 12-dump limit and that five of the 124 vehicles were registered to businesses. Poor enforcement of the law can undermine citizen confidence and in effect, penalize those who choose to act in accordance with the law.

**Recommendation 02**

Our discussions with Solid Waste Management indicate that establishing the 12-dump limit was necessary to control excessive dumping by persons involved in commercial businesses. The 12-dump limit also provides flexibility to residents who might need to take a large volume of waste away at one time. We talked with management from both

Solid Waste Management and RVRA to determine how best to prevent violations of the current law. The following summarizes the discussion:

- The City's relatively new bulk and brush weekly pick up program has significantly reduced the number of residential dumps from city citizens. The reduced volume should make it easier to maintain Solid Waste Management's database of residential dumps.
- The scale terminal becomes a bottleneck on busy days. If citizens were required to provide their names and addresses and to sign the scale receipts, the time to process a vehicle could increase dramatically and result in additional backup at the scale terminal.
- RVRA's runs a daily report package that includes "residential dumps" by locality. RVRA could fax a copy of this report to Solid Waste Management each day. Solid Waste Management could update their spreadsheet from this report rather than waiting for receipts from the transfer station. This quick turnaround time should allow Solid Waste Management and RVRA to put holds on accounts in a more timely manner.

At this time, we believe the daily faxed report should improve the accuracy of Solid Waste Management's database and the timeliness of account holds at RVRA. Our department should review the data on residential dumps within 6 to 12 months to determine the effectiveness of this remedy..

### **Management's Response 02**

Solid Waste Management agrees with the findings and has instituted an additional information sheet to be completed when a citizen requests a Special Homeowner Dump permit. This new information will assist the Solid Waste Management division of Public Works, in maintaining accurate data on those individuals who utilize the services of the RVRA

### **CONCLUSION**

Based on the results of the audit, we conclude that the system of internal controls provides sufficient assurance that tipping fees billed are correct and in compliance with the terms of the membership agreement.

We would like to thank the management and staff of the Solid Waste Management Department and the Roanoke Valley Resource Authority for their cooperation and assistance during the course of this audit.

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